Comparison of Afghan Remittance Systems

Senior Honors Thesis

Presented in Partial Fulfillment of the Requirements for the

Bachelor of Science in Business Administration Degree with

Honors Research Distinction in the Fisher College of Business of

The Ohio State University

By: Nayan Rao

The Ohio State University

2021

ABSTRACT

In 2019 the Special Inspector General for Afghan Reconstruction noted that only 15% of Afghans have a bank account or use a mobile money provider. Nonetheless, Afghans continue to send and receive money from both domestic and international partners using services like Western Union (a U.S. based, international money transfer company), and the long-used, informal, Hawala system. This research examines and compares different payment/remittance systems available to Afghans. Specifically, this research uses factors derived from previous research to conduct a comparative analysis of several payment/remittance systems: Hawala, In Person Western Union Money Transfers, Traditional Banking Wire Transfers, and Bitcoin transfers. While several systems are used by Afghans, Hawala has historically enjoyed an advantage due to its community-developed trust. Even though Western Union transfers are reliable, faster, and trackable, formal identification requirements and corruption in Afghan Banks has resulted in distrust in, and limited use of, such established institutions. The research found trust to be the main factor that separates Hawala from alternatives and the comparisons lead to a recommendation that trust building through community relations is a central part of a successful framework for a legal, trusted, and reliable payment system.

ACKNOWLEDGEMENTS

I would like to thank my Research Advisor, Dr. Alam Payind, Director of the Middle East Studies Center at the Ohio State University for his mentorship and support throughout this entire process. I also would like to thank Dr. Andrea Prud'homme, my program advisor, for her guidance and mentorship over the past two years, Mr. Matthew Bonner for being an incredible friend and mentor during my time at Ohio State and throughout this process, as well as the support of my family and friends. Finally, I would like to thank both the Honors Contract Program at the Fisher College of Business for this opportunity as well as the Middle East Studies Center at the Ohio State University.

Table of Contents

INTRODUCTION 5

LITERATURE REVIEW 6

Trust 9

Reliability 10

Transaction Speed 11

Fees 12

Anonymity 12

METHODOLOGY 13

REVIEW OF FINANCIAL SYSTEMS 16

Hawala System 16

In Person Western Union Money Transfer System 21

Traditional Western Style Banking Money Transfer 24

Cryptocurrency - Bitcoin 25

BAD ACTORS 28

ANALYSIS DESCRIPTION AND ANTICIPATED RESULTS 29

FACTOR COMPARISON 29

Trust 29

Reliability 31

Transaction Speed 33

Fees 35

Anonymity 37

PROPOSED IMPROVED SYSTEM DESIGN 42

CONCLUSION 44

BIBLIOGRAPHY 46

Introduction

When looking at the Afghan banking system, the US Special Inspector General for Afghanistan Reconstruction (SIGAR) noted in his 2019 report to Congress that just 15% of Afghan adults have either a traditional western-style bank account or use a mobile money provider (Special Inspector General for Afghanistan Reconstruction, 2019). Some might argue that this is not surprising given Afghanistan's ongoing status as a war zone, and that as a result Afghans have largely left what is considered standard western-style banking underutilized. However, Afghans, both inside and outside of Afghanistan, require the same movement of capital and resources as their Western counterparts. Contractors, non-governmental aid organizations (NGOs), and governments require the ability to quickly move funds in to and throughout the country. The question arises, how does the equivalent of millions of dollars worth of money move in, out, and throughout Afghanistan when most people do not currently use a bank? The officially unregulated and informal system of payment called *Hawala* continues to enjoy high usage for the movement of capital by many Afghans. The system works by facilitating transfers of money through the informal connections that exist between merchants, called *Hawaladars*. A transfer initiator goes to their community Hawaladar and can exchange money for a letter of credit that can be redeemed by the recipient at the end destination from a different Hawaladar in the network (Schramm & Taube, 2003). This way the physical money never leaves the place of origin, but the transfer of the value of the money still occurs, and the recipient can collect their physical money at their specified destination, essentially replicating the function of a bank wire transfer but without the involvement of official, regulated institutions.

While there are many payment systems that have been, and will continue to be, used in Afghanistan, there is very little concise historical analysis conducted on these payment systems,

and very little analysis laying out what characteristics define these payment systems and comparing them with other payment systems. It will be critical for businesses, governments, NGOs, and non-profit organizations to understand how money is transferred both in to, out of, and within, Afghanistan and to understand which factors serve as the order qualifiers for the Afghan people using a transfer system. Knowing why a specific system is utilized could lead to more practical decision making about better ways to transfer funds for state and non-state actors operating within the country. This study seeks to lay the framework for research to investigate and establish, through looking at both primary and secondary sources, how these systems developed, how they came to take root in Afghanistan, and what (if any) improvements have been made to the system over time, through a review of the current literature of informal payment systems as well as specifically Afghan remittance systems, Afghan banking systems, and specifics of the Hawala system.

Literature Review

Banking within Afghanistan is not new, in fact, the Hawala system which is currently in use was originally created centuries ago in Afghanistan (Schramm & Taube, 2003). However, a precursor of Hawala can trace its roots back to the Teng Dynasty in China where a system of transferring money generated from the lucrative tea trade was initially designed and implemented so traders did not need to travel with vast sums of money on their person. The Chinese system was based on tokens to avoid robberies while transferring large sums of money from regional capitals to the central, imperial capital. Merchants in the Middle East, seeing the success of this system in moving wealth while deterring robberies, adopted the system for use on the Silk Road to facilitate safer trade on their routes (Nakhasi, 2007). Hawaladars became stationed at each

caravanserai where caravans traveling along the silk road would rest and trade, and helped facilitate transactions throughout the entire Silk Road trading system, which passed through modern day Afghanistan.

Modern Western-style Afghan banking started with the formation of the Bank-e-Millie Afghan in 1933 and the first Afghan Central Bank in 1939 (Ateed & Rehman, 2020). Since then, the Banking system has expanded and contracted as the economy and central government changed over the next several decades. The current, formal Banking system in Afghanistan remains weak and largely operates without extensive oversight from Da Afghanistan Bank (DAB) - the Central Bank for Afghanistan (Special Inspector General for Afghanistan Reconstruction, 2014). The state of the banking sector has long been a concern for regulators and as the World Bank (2018) notes, by the end of 2001 the formal financial system was essentially nonexistent. Afghanistan has been a war zone since the beginning of the Soviet Invasion in December 1979. By the time United States invaded Afghanistan in 2001 and began military action there were six, now defunct, banks in operation. After the invasion, as development and reconstruction began, more banks were created. By September 2010 there were seventeen banks operating with assets of approximately US$2.6 billion, a significant development in the banking sector (Rondeaux, 2011). Almost a decade later in 2019, DAB reported regulating twelve banks operating in Afghanistan, including seven privately owned banks, three state-owned banks, and two overseas banks with Afghan branches. (Da Afghanistan Bank, 2019). While clear progress has been made, many deeply entrenched issues with formal banking systems remain. According to SIGAR (2019) and The World Bank (2018), Afghan's formal banking has an estimated usage by only 10%-15% of Afghan adults and an even smaller percentage of only 3.8% of Afghan women.

This clear lack of use of the formal financial system shows that these systems are not trusted by the people, not accessible for Afghans, or both. In fact, in 2010 the banking system was hit with a major corruption fraud scandal involving Kabul Bank, the fallout of which reputationally devastated the entire banking system and caused almost half of all individuals' bank deposits in Afghanistan to be withdrawn (Special Inspector General for Afghanistan Reconstruction, 2014). In addition, governmental attempts to recoup stolen funds from Kabul Bank have, ten years later, been slow and mostly unsuccessful. The SIGAR (2019) notes in their quarterly report to the U.S. Congress that "59.6% (approximately $588.2 million) of the $987 million loan portfolio remained unrecovered, as of September 20, 2019" and that the government had not received any cash in the last year from Khalilullah Ferozi, the former CEO of Kabul Bank and one of the "group of politically connected executives and shareholders" who operated the fraud scheme which stole the money from the bank. As a result of the poor state of the Banking Sector, The World Bank (2018) summarizes banking within Afghanistan as "underdeveloped and vulnerable" as it continues to try to deal with the repercussions from the Kabul Bank scandal. While oversight may be lacking, it is important to note that it still does technically exist, which explains why criminal activity, including terror groups that operate in the region, utilize Hawala and its informal network to move money around the globe undetected (Passas, 2003). Other more regulated financial institutions would not offer the same anonymity as informal networks such as Hawala. This has led to serious concerns about the lack of formal or regulatory oversight in Hawala, which continues to be difficult to monitor or change due to the private nature of the system.

Despite government concern, Hawala remains the conventional system for transferring capital for many Afghans (including regular citizens conducting routine financial transactions)

and is sometimes the only service available (Passas, 2006). In fact, the Hawala system and similar informal payment systems have been used throughout history by other groups in the Middle East including Muslims, Jews, and Christians. As an example, after the First Crusade in 1099 the Knights Templar, attempting to help pilgrims who traveled to Jerusalem, developed a credit system so pilgrims could avoid traveling with large sums of money needed to fund the months long journey from Europe to the Holy Land. Pilgrims would leave money at Temple Church in London and would be able to get a letter of credit that could be redeemed, and funds withdrawn, once they reached Jerusalem (Harford, 2017). While the system used by the Templars is no longer in use, informal payment systems continue to operate around the world. Similar documented systems have been operating in Thailand, Myanmar (Kubo, 2017), Djibouti (Aman, Nenovsky, & Mahmoud, 2014), Somalia (Cockayne & Shetret, 2012), Zimbabwe (Nyoni, 2012), and Pacific Islanders in New Zealand (Pairamma & Le De, 2018), which all share the same informal structure that has allowed Hawala to endure.

Previous studies into remittance systems have identified five key factors contributing to a continued prevalence of informal systems, even as formal systems have gone through periods of growth and decline. Specifically, the aspects of trust, reliability, transaction speed, fees/expense, and anonymity are the key factors identified by literature as reasons for continued preference for informal systems.

Trust

Trusts and Hawala are linked as the term *Hawala* in Hindi means “in trust” (Nakhasi, 2007) and in Arabic “transfer” or “trust.” Trust is one of the most important factors to understanding why longstanding informal systems such as Hawala have succeeded over formal

banking systems. Trust is vital to informal systems throughout the world, so in parts of the world with less economic and physical stability along with weak governance structures in place, such as in Afghanistan, personal and community ties take on added importance. In Somalia, the entire informal remittance system is powered by personal trust in their local clans and communities rather than the more theoretical power attributed to western-style banking (Cockayne & Shetret, 2012). In the case of Somalia, informal systems have flourished because these remittance/payment systems "often [rely] on socially embedded mutual trust…" to operate successfully (Pieke, Van Hear, & Lindley, 2007). That trust gives the groups conducting informal remittances legitimacy, as their ability to do business is directly tied to their standing in the community. Nyoni (2012) noted that trust not only helps develop the initial relationship between the network operatives and the customer, but also serves to sustain that relationship into the future. It is because of the trust between the network users and network operators that the system has become reliable in a virtuous cycle. This is also important for the relationships between the operators within the systems who also require trust with each other to develop and sustain a system that is reliable for them and their clients and has developed the necessary internal controls to protect the reliability of the overall network (Monsutti, 2004).

Reliability

Reliability is "the quality of being reliable" which in turn is defined as "suitable or fit to be relied on: dependable" and "giving the same result on successive trials" (Merriam-Webster, 2021). Essentially, it is the belief individuals have in the system because of a history of successfully completing transactions over time. While trust is "to place confidence in" a person (Merriam-Webster, 2021), reliability is earned when both individuals in the system and the system itself are effectively and repeatedly completing transactions. Reliability results in people

knowing that when they send or store money with a bank or with Western Union (a U.S. based, international money transfer company), based on their past success conducting transactions, there is confidence that this time the transaction will also be successful.

Western modern banking is built on confidence in the reliability of the institution over time, governmental oversight, and the government's guarantee of some security. In the United States, for example, individuals choose which bank to store their money with and believe that the banks are reliable and that their money will be available for withdrawal at a point in the future as requested. However, if the bank encounters trouble the U.S. government, through the Federal Deposit Insurance Corporation (FDIC), insures an individual's deposited funds up to US$250,000 per owner. Funds under US$250,000 stored in an account are safe even if the bank fails (Federal Deposit Insurance Corporation, 2020) making the entire banking system very reliable. In Afghanistan, a country that as of April 2021, is still an active war zone where terrorist organizations like the Taliban continue to attack infrastructure and people including during the most recent elections (Gibbons-Neff & Rahim, 2019), reliability is very important if a system is going to be used by the Afghan people.

Transaction Speed

The speed to conduct actual transactions has been identified as an order qualifier for people using a given system. Schaeffer (2008) explains that transactions in the Hawala informal network can be completed in one to two days, much faster than the formal banking alternatives available. The importance of speed is only amplified when the remittance or payment is going to a rural area where physical formal banking outlets are not readily available and reaching one may require long travel time. In addition, not everyone has the resources to easily travel long

distances in a convenient, safe, or timely fashion. The time necessary to travel to a location to conduct the transaction, in addition to the time necessary for the transaction to be completed, is part of the overall transaction speed. For some systems, the ability to use a local person to facilitate a transaction removes part of the process time to conduct the transaction.

Fees

Fees have the potential to reduce the amount of money actually available to be transferred, as they can erode the funds available to transfer or make transactions more expensive to conduct. In Afghanistan, remittances are generally sent by the diaspora back home to friends and family (Payind, 2021). A system with lower fees allows individuals to more affordably transfer funds and allows more of the value being transferred to be available to the recipient instead of being consumed by fees. Traditional, western style banking often charges higher fees than informal networks; Hawala transaction fees are usually 2-5% of the total transaction value while a traditional bank could charge 10-20% (Ballard, 2005).

Anonymity

Finally, anonymity is the last key factor identified by previous studies. It is no surprise that anonymity would be included as it is a key feature of many informal systems. For Hawala, the system protects users by shielding the movement of their money from other family members, illicit groups, the government, and other regulatory authorities. This results in a situation where individuals can avoid currency controls and “red tape” created by government control and oversight mechanisms (Schaeffer, 2008). This largely draws from the way that Hawala and other informal remittance systems work. In these systems, information is limited to the initiator (the person transferring funds), the Hawaladars facilitating the transaction, and the recipient (the

person receiving funds). The money itself never touches or flows through the formal banking system nor are any individuals outside of the direct parties to the transaction notified or provided with any information (Schaeffer, 2008). Thus, the information remains hidden from government organizations, banks, and other individuals.

Methodology

Current literature identifies five major factors (trust, reliability, transaction speed, fees, and anonymity) that are key to payment systems both within Afghanistan and throughout the world. Unfortunately, the nature of informal systems like Hawala make collecting specific financial data, and thus using more traditional methods to compare formal payment systems, impossible, as it is not possible to identify transaction frequency or amounts, entities participating, interest rates, or payment limits. Thus, this research is not collecting primary data and will be using secondary research and information from vetted sources such as the peer-reviewed studies, international agreements, the International Monetary Fund, The World Bank Group, the Afghanistan Ministry of Finance, and the United States Inspector General for Afghanistan Reconstruction (oversees all US funds in the country), as these organizations have assembled the necessary data to make comparisons. It is vital that all information originate from vetted sources to ensure that the analysis conducted is reliable and accurate.

Establishing these usage preference factors from literature is key because they will be used to develop profiles of various remittance systems of Hawala, formal banking, and Western Union and to compare each system with each other and with newer systems like cryptocurrencies (specifically Bitcoin in this study). Some studies, like those conducted by Schaeffer (2008), have compared Hawala and Western Union, but none have also included the newest system of

cryptocurrencies. With the quick pace of technological advancement, the profiles developed from literature-identified traits should be applied to systems that have begun to penetrate Afghanistan. The SIGAR has noted that the number of Afghans with a bank account or using mobile banking is at 15%, while The World Bank reports that a smaller number of Afghans, 10%, have only a bank account and only 2/3 of formal businesses have access to a bank account (SIGAR 2019, The World Bank 2018). This is much lower than the United States rate of approximately 95% of households using banking services (banks or credit unions) (Federal Deposit Insurance Corporation, 2020). Money is moving in Afghanistan, just not through formal channels. If secure, mobile-based payment systems could be used by the people of Afghanistan, it provides an opportunity for businesses and nonprofit organizations operating in the country to make their business practices more effective.

After reviewing literature, it was possible to develop profiles of the attributes of each payment systems. As previously discussed, the primary factors to be incorporated into the profiles include trust, transaction speed, fees/expense, reliability, and anonymity. This also allows the various systems to be compared to other financial systems so that there is a more complete understanding of the similarities and differences between systems, and why certain payment systems are used in Afghanistan. In addition, cultural and governmental factors will be considered to provide more insight as to why certain systems have succeeded in Afghanistan, and to provide recommendations for how each system could improve participation in the use of their services. Finally, based on the information collected, a model of an improved remittance/value transfer system is developed to identify how it can meet both international best practices and the needs of the Afghan people. This development will allow for the practical application of the policies explored and the recommendations crafted and to explore how

Western-dominated international standards can be applied to Afghanistan. Having this deeper understanding will be key for businesses and NGOs as Afghanistan moves forward with newer technology in the future.

However, a comparison alone does not offer complete insight to develop recommendations of changes that can be made to improve system usage by Afghans. To do that, government policy, internationally established financial best practices, as well as already established cultural reports on Afghanistan must also be analyzed and included into the final recommendations to establish the practicality of the recommendations. With these added layers of analysis, which take the location and processes of the payment systems into account, a recommendation will include a discussion of the issues regarding how to improve the system to better meet the needs of the Afghan people and thus better serve all users of the financial sector. The creation of a system model will also test the feasibility, and the strengths and weaknesses for a system that both meets the needs of the Afghan people while also meeting the banking sectors internationally agreed upon best practices. This system will have to use some level of encryption and be backed up by real assets to build the necessary trust of people, while also remaining mobile so that the system can reach the many Afghans who do not have a bank account or live in the major cities where traditional banking operates from. Together, all this information will aid businesses and NGO's operating in Afghanistan understand how they can best move their money and help the banking system improve to meet the needs of the people.

Review of Financial Systems

Hawala System

The Hawala network has emerged as a vital provider of several financial and non-financial business services, chief among them the operation of a remittance transfer system. Unlike traditional, western style banks, which are often limited to urban settings, Hawala operates an informal network throughout Afghanistan and the world, in both urban, rural, and remote communities. Local individuals act as Hawaladars who serve as the contact points between other Hawaladars in the network and users.

In the Hawala system a client/user contacts a local Hawaladar, known in the local community, to transfer funds. Then the initial *Hawaladar A* takes the money and in exchange issues a letter of credit to the user. These letters of credit have personal identifying information so only the intended or authorized recipient can withdraw the funds later from another Hawaladar. The letter of credit can then be redeemed by the user or a verified recipient with *Hawaladar B* at the end destination. Thus, the actual physical currency never leaves the country or community of origination and instead the network facilitates the transfer of value without directly moving currency from the origination point to the destination. In addition, for some transactions, an external third party, in exchange for a fee, can act as a guarantor of funds if both the originating and receiving party require a guarantee that if funds are not delivered, they will be insured by another trusted agent who is brought in as a separate, additional party to the transaction (Payind, 2021).

Without actual physical movement, currency does not interact with or flow through traditional banks and can circumvent local, national, and global regulations regarding money transfers and other international banking rules. The transaction information, including the amount transferred and the parties of the transaction, are limited to the parties directly involved in the transaction, and consequently shielded from currency controls and anti-money laundering rules.

Each country, including the United States, has their own version of the anti-money laundering regulations, known as "know your customer rules" which require banks operating under their jurisdiction to "to know (and retain) the essential facts concerning every customer" and understand the risks associated with doing business with a specific client (Financial Industry Regulatory Authority, 2021). This requires traditional banks and Western Union to have identifying information about a customer and store that information on their system. Thus, people who distrust government(s), or otherwise want to avoid governmental controls, are disincentivized to use a system that records their information and are more likely to use an informal system which shields their information. However, it is important to note that regular Afghans, who may not have access to other systems or want only to avoid currency controls or use a system with lower fees, also use the Hawala system. This is due to the network charging a predetermined fee to facilitate the transfer that are historically significantly less than those charged by services like Western Union or a traditional consumer bank (Schaeffer, 2008). These relationship-based services are generally cheaper because they have very little operating expenses, as they operate from the Hawaladar's home often in lower cost, more dispersed areas instead of formal institutions which often operate in high rent areas of cities or in a separate business location (Payind 2021).

The system itself relies on the trust between the user and the individual Hawaladars that funds will be available when and where agreed upon, and trust between Hawaladars that they are fulfilling the terms of service for the user. Hawaladars in modern Afghanistan are bound by religious, historic, and business ties, the interconnected nature of their social network and business ventures, and repeated transactions within the network act to establish and bolster trust between the Hawaladars (Schaeffer, 2008). Common religious ties and values "promote trust through beliefs of reciprocity" and thus use that connection as a basis for a mutual relationship (Chuah, Gachter, Hoffmann, & Tan, 2016). However, religious minorities like Hindus and Jewish people have also held trusted Hawaladar positions in their local communities. As Dr. Alam Payind (2021) notes, many religions (e.g., Islam, Hinduism, Judaism, Christianity) all require high levels of responsibility and respect given to other people's property. Historically religious minorities have often been Hawaladars and since Hawaladars usually inherit their practice from their family, they have both a deep sense of honor for their family's legacy and over time have developed a reputation of trustworthiness in their community. Payind notes that during his childhood in Afghanistan, his community trusted a local Jewish Rabbi, a leader of a religious minority in the area, with their money as the Rabbi's family had for generations run a Hawaladar practice and the community had developed a deep respect for their operation and trust in the family. Thus, Hawala is both reliable and trusted as an individual Hawaladar represents their family, which may operate in a specific area for generations. In the end, people trust the reputation a family has developed, and their community has granted over years, which is especially meaningful in an environment of governmental and organizational instability. When governments have toppled, local Hawaladars have endured and continued to provide their service within their communities. The reputational trust has created a system where people "trust

[Hawala] more than the banks because if the government falls the banks are the first place looted" (Payind, 2021).

Thus, reputational trust is the backbone of this system for deeply rooted religious, cultural, and societal reasons, something not easily replicated in other places. **Figure 1** shows the process for transferring money from the initiator to the recipient using the Hawala system.

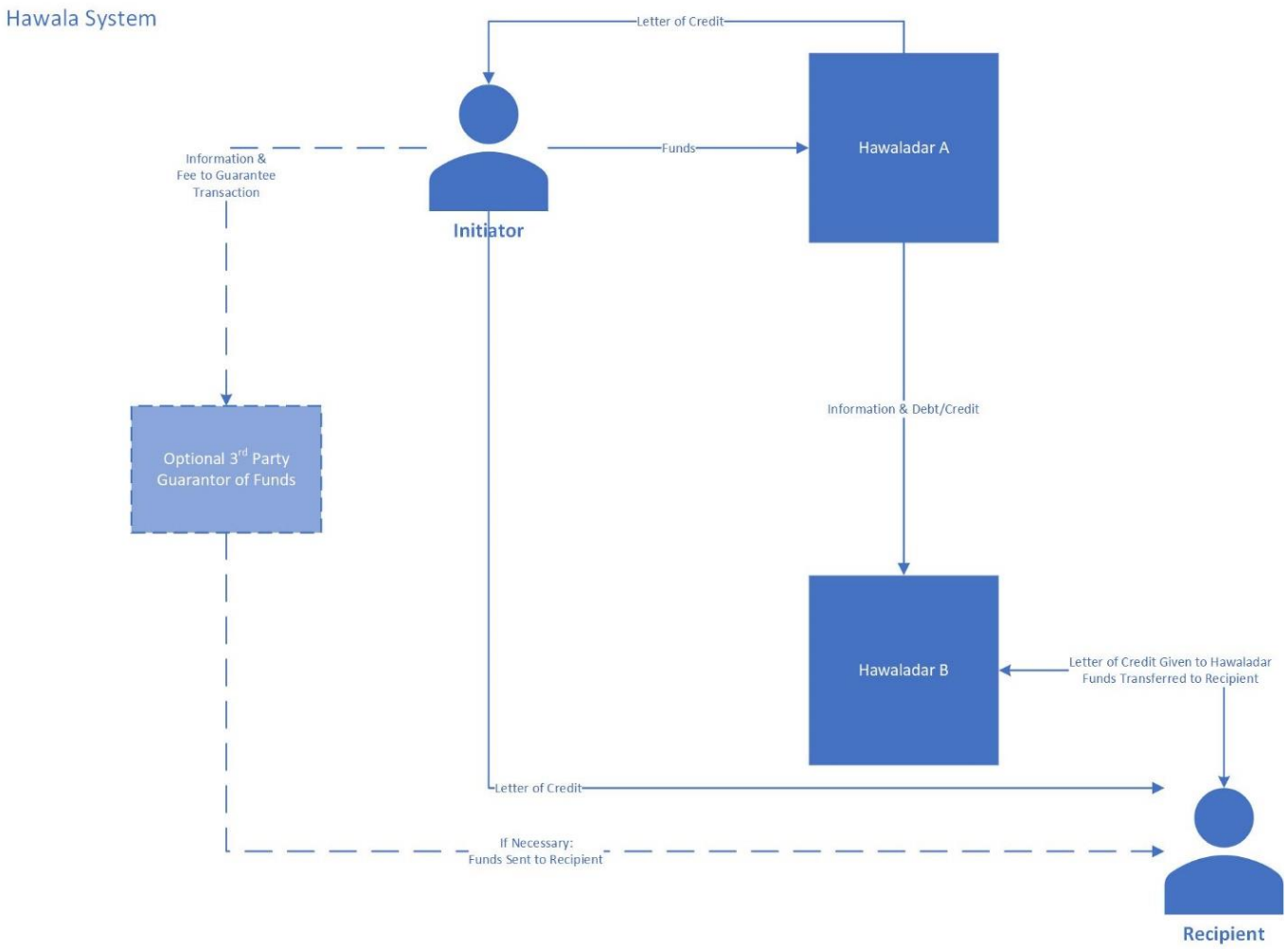


FIGURE 1: HAWALA SYSTEM

In Person Western Union Money Transfer System

Western Union was founded in 1851 and today operates in over 200 countries while serving over 150 million customers worldwide, helping to facilitate the movement of money around the world (Western Union, 2021). Western Union's in person money transfer system allows for quick funds transfers from/to almost anywhere in the world. Today the system allows the transfer of funds within minutes, giving recipients almost instant access to transferred funds (Western Union, 2021).

Individuals enter a physical Western Union transfer location and fill out the money transfer order. Adult initiators must at this point provide the funds to transfer and cover fees, as well as provide government-issued identification to begin a transfer. Under the current system, individuals in one country can send funds to another country through the Western Union transfer system by walking into an office and providing either physical currency or by transferring funds from bank/credit or debit cards, direct bank account withdrawal, or through new technology solutions like Apple Pay. (Western Union, 2021). Then the recipient at the transfer destination Western Union location can within minutes receive the transfer funds in local currency or check (bank draft) from a Western Union destination office or have the funds deposited directly in a bank account. Both initiator and recipient users are therefore identified and tracked, and transfer amounts are recorded. The requirements that individuals travel to the nearest physical Western Union office for in-person initiation and acceptance of funds transfers may be an issue for many would be users. In Afghanistan, a supermajority of locations are in the city of Kabul located within traditional bank premises, like the Azizi Bank, (Western Union, 2021) putting them out of reach for Afghans living outside the city, or for those who don't feel comfortable entering a bank. In addition, Western Union charges a dynamic transaction transfer fee based upon the

value of the amount transferred and international transfers may require a currency exchange, which represents an additional ‘cost’ of the transaction. For example, sending US$500 from the United States to Afghanistan would incur the exchange rate as Western Union pays in the currency of the recipient country, in addition to an estimated $12.50 fee for processing and handling the transfer. Western Union determines the exchange rate and profits off of both currency exchange rate and the fees charged depending on transfer type and location of destination (Western Union, 2021).

The process to transfer funds over the Western Union system is shown in **Figure 2**. The initiator goes to their local Western Union location where they fill out the required paperwork and pay the transfer fees and transfer amount. Western Union then transfers the information and value of the money, converted into the local currency and Western Union location designated by the sender. The recipient then shows government-issued identification and picks up the funds from their local Western Union location.

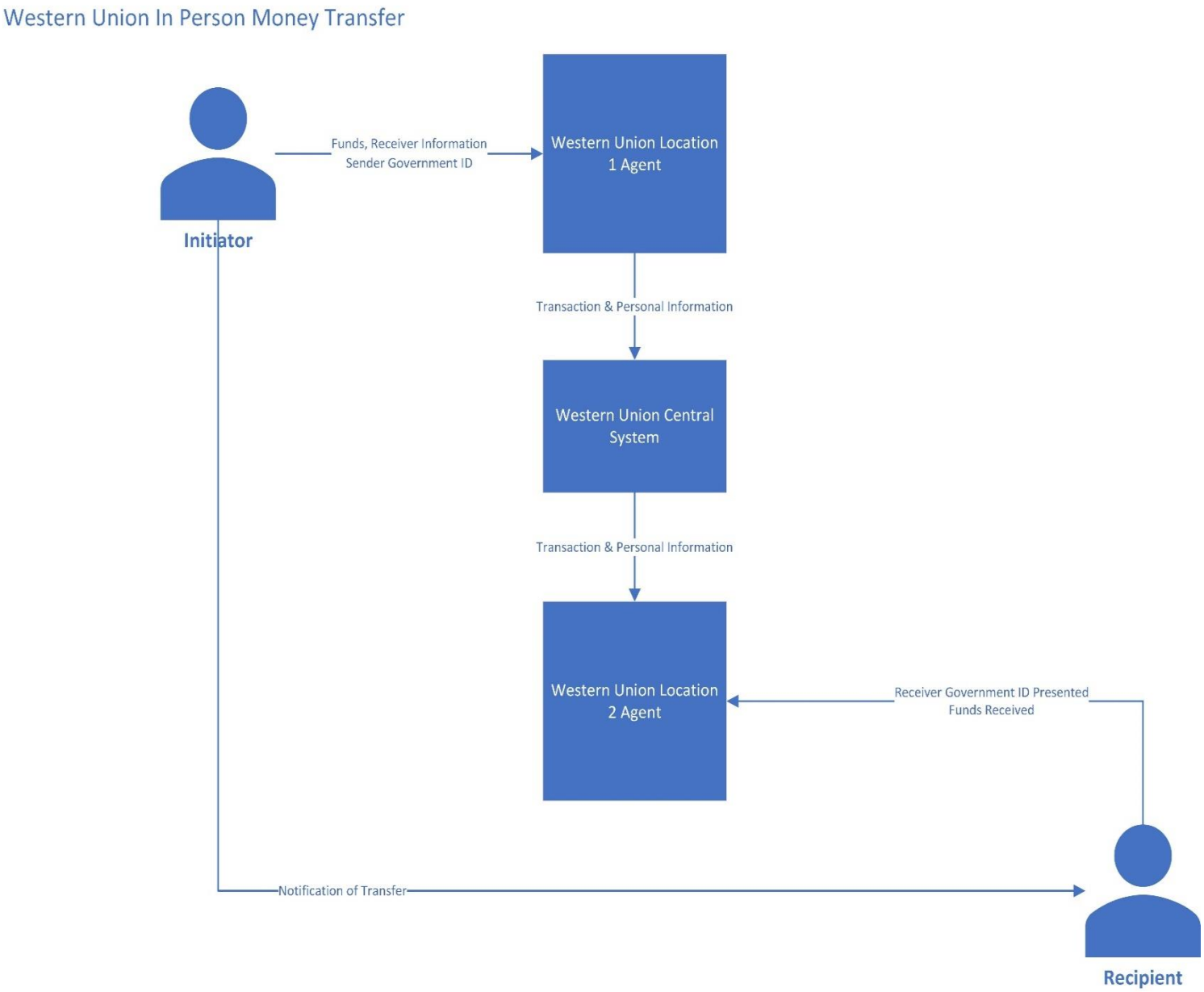


FIGURE 2: WESTERN UNION MONEY TRANSFER

Traditional Western Style Banking Money Transfer

Banks use The Society for Worldwide Interbank Financial Telecommunication (SWIFT) system to directly and securely communicate with each other about financial transactions. The system allows the recipient bank to be notified about the transfer from the initiator and enables them to make the funds available for the recipient before the actual currency is transferred to their bank. This allows for quick transfer times while confidently and securely knowing the incoming funds will arrive. The transfer system also requires significant disclosure and regulation on both the initiation and receipt side of the transaction. Since banks are regulated by national and international rules, they are required to record detailed information about both parties in the transaction and the transaction information is available to government regulators and law enforcement to review. The funds transfer itself is also able to be intercepted by regulators and law enforcement, if necessary.

Traditional, western style banking money transfers in Afghanistan require the originator (if the transfer originates in Afghanistan) or the recipient (if the recipient is in Afghanistan) to have a local bank account and send money through the global, established, regulated banking system. The initiator selects which of their accounts to use and the value of funds to transfer, then they, along with the bank, fill out money transfer paperwork detailing the bank, individual, and account number for both the initiator and recipient where they want the money to be delivered and then confirm the information. Initiators then pay the transfer fee and have the requested funds withdrawn from their account and transferred to the recipient's account. Recipients receive the funds transfer directly into their bank account within days, resulting in currency leaving one country, or area, and being moved to the recipient's country. **Figure 3**

shows the simplified process for transferring funds internationally from the initiator to the recipient.

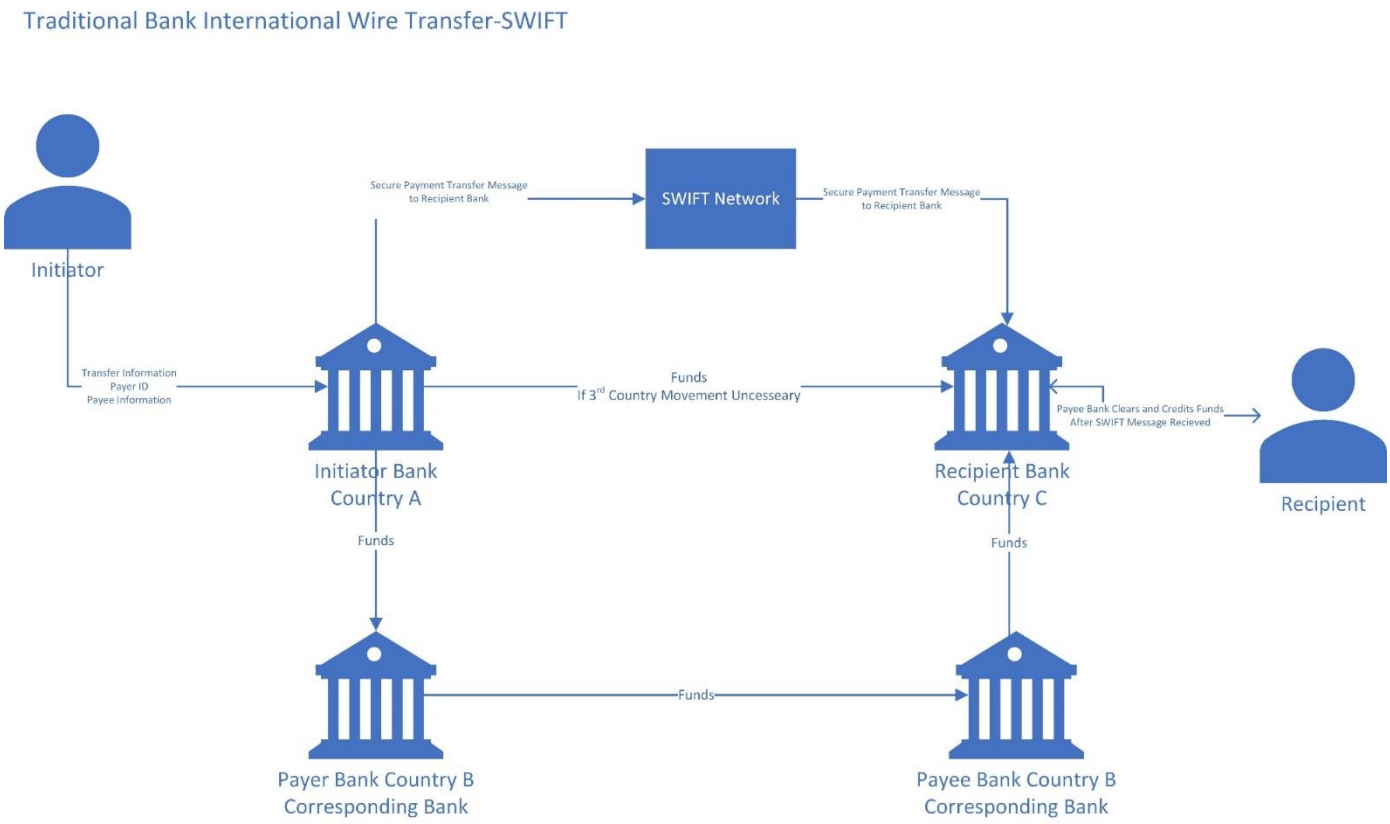


FIGURE 3: WESTERN STYLE INTERNATIONAL BANK TRANSFER

Cryptocurrency - Bitcoin

Bitcoin (BTC) is one of the most popular types of cryptocurrencies currently available throughout the world. Cryptocurrencies are a new form of holding and transferring value and but are not yet widely adopted (Coppola, 2020). Bitcoin is a decentralized digital currency where transactions are made without intermediaries. Individuals can buy or sell Bitcoin on global

exchanges or directly transfer Bitcoin between individuals, companies, or between a mix of individuals and companies (Yellin, Aratari, & Pagliery, 2018). The value of Bitcoin changes daily and is highly volatile, with one Bitcoin valued at a range of less than US$10,000 to over $59,000 from March 2020 to March 2021 alone. See **Figure 4** for Bitcoin Value Chart March 2020- March 2021 (Yahoo Finance, 2021). While Bitcoin operates in a system designed to prevent fraud, exchanges (the facilitator to converting bitcoin into widely accepted currency like the US Dollar or Euro) have been subject to several major thefts of Bitcoin (Security Magazine, 2020).

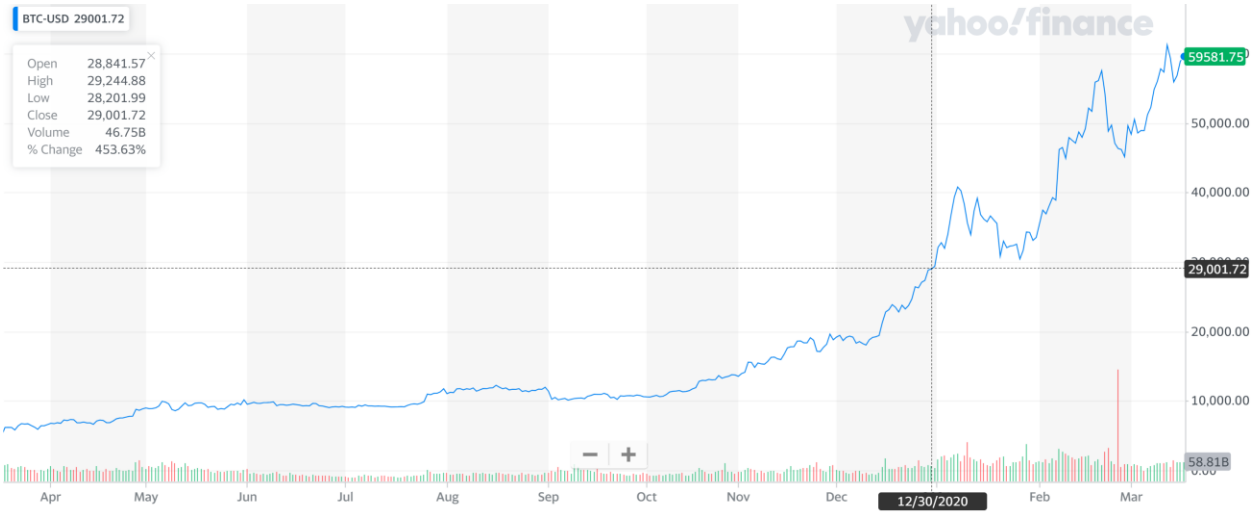


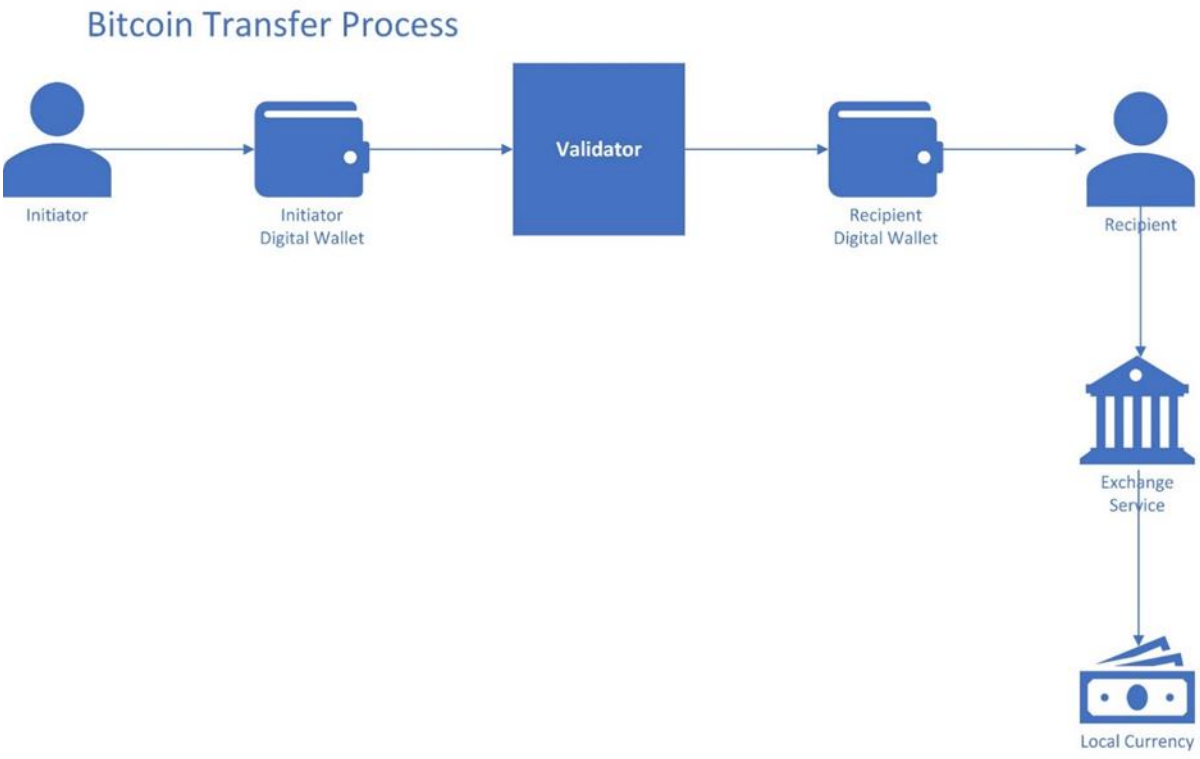
FIGURE 4: BITCOIN VALUE TO USD MARCH 2020-MARCH 2021

Transactions are public and stored on the Bitcoin digital ledger, but the records do not identify specific individuals, rather the ledger identifies only the electronic Bitcoin addresses. To transfer Bitcoin, the initiator opens their Bitcoin digital wallet - a virtual and secure way to store Bitcoin - and uses the "send" functionality to send the funds to a specific recipient's wallet address (Bitcoin.com, 2020). Governments cannot easily access the identity of individuals

utilizing a specific Bitcoin digital wallet address. Since Bitcoin does not utilize the global banking system, it is not subject to global banking regulations required of other financial entities, such as banks, are subject to, which increases the anonymity of Bitcoin transactions. Individuals need only transfer the number (including fractional quantities) of Bitcoin equal to the value they wish to transfer to the recipient. The recipient receives the Bitcoin almost instantly and can then choose to immediately convert the Bitcoin to the currency of their choice by selling the bitcoin on an exchange, or they can choose to wait and hold the Bitcoin until they wish to convert.

Figure 5 shows the simplified process for transferring Bitcoin between two parties using digital wallets and the optional conversion of Bitcoin to local currency by the recipient if they choose to convert to currency from cryptocurrency.

Figure 5: Bitcoin Transfer Process



Bad Actors

All the reviewed systems are constrained by the political and economic environment within Afghanistan. As a war-torn nation with significant and on-going fighting, Afghanistan lags the world in infrastructure development with lower infrastructure quality and technology use. Technology use is limited by both cell phone tower reach and availability of steady sources of electricity. Cell phone towers largely cover the city of Kabul and the surrounding area and are slowly expanding throughout the country but face significant risks as Taliban fighters have targeted their attacks at towers. In the lead up to the 2019 elections, the Taliban engaged in a strategy to destroy infrastructure with the goal to disrupt elections (Gibbons-Neff & Rahim, 2019). The Taliban, among other bad actors, have used informal systems like Hawala to avoid the traceability inherent in traditional banking systems and avoid international scrutiny and sanctions. Just like ordinary Afghans, the Taliban would have Hawaladars they trust and can use to access the Hawala network to move their funds (Payind, 2021). Their efforts to damage infrastructure serve to disrupt the government, but importantly do not impact their ability to move their funds around using the Hawala system. Due to the attacks on infrastructure, methods that do not rely on wireless communication and steady electricity service more likely to be used and have greater success by all Afghans, as the continued strength of the ancient Hawala system utilizes. However, since Hawala is used by many ordinary Afghans, the government cannot hurt the Taliban's ability to transfer funds by targeting Hawala without also hurting ordinary citizens.

Analysis Description and Anticipated Results

Based on the literature, the factors of trust and reliability appears to be the most important factor for all Afghans and that a comparison between systems will show that the Hawala system scores high on all factors while Western Union-style systems and traditional Western-style banks offer less anonymity, trust, speed, and have high reliability, but at higher cost. Thus, a system like Hawala, that has high trust and reliability, offers anonymity in transactions, while offering competitive transaction fees and transfer speeds is expected to be preferred by the Afghan people. Cryptocurrencies should score almost as high as Hawala, as these networks have great potential and have been known to be fast, anonymous, and reliable. To determine the validity of these initial, anticipated results, this research will use a comparative study method to identify similarities, differences, and patterns between the Hawala system, Western Union system, formal banking system, and the cryptocurrency system Bitcoin for each factor. These payment systems represent a major spectrum of formal to informal banking with the traditional banks the most formal and Hawala being the most informal currently available. They also represent systems that are common throughout the world, but more importantly for this study could be/are available in Afghanistan.

Factor Comparison

Trust

Afghanistan has been plagued by corruption and scandal in its financial institutions, leading to little trust in institutions like traditional banks. Individuals trust the Hawala system

and their local Hawaladars based on the long-built reputation of the Hawaladar's family, sometimes developed over generations, in the community (Payind, 2021).

Hawala: The Hawala system operates largely because of trust between individuals and their local Hawaladar. Since Hawaladars are members of the local community and largely have the same religious practices as their users, they also share multiple social connections with users. Even when religious practices differ, many religions like Islam, Judaism, and Christianity share the same roots and foundational values. In addition, reputational trust is built over time, allowing Hawala operations to gain increasing legitimacy the longer they operate in the community. It is a system that relies on trust between Hawaladars to sustain the network, and merchants self-regulate the system by acting as a check and balance on each other and expelling Hawaladars who violate the trust of their peers, ensuring all parties are trustworthy (Schaeffer, 2008). Finally, trust is needed for the transaction to take place. The initiator trusts their Hawaladar to take their money and transfer it to another Hawaladar for their recipient to receive. At the same time, the Hawaladar's trust each other that they will recover the funds paid out and the recipient trusts that the funds will be available for pickup (Jost & Sandhu, 2000). In some cases, an external third party can be brought in to act as a guarantor of funds in case there are any problems with the transaction (Payind, 2021). Importantly, Hawala works effectively because it does not require people to trust the entire system network - individuals only need to trust the person they directly interact with.

In Person Western Union Transfer: As an institution Western Union itself has a low level of trust with the people of Afghanistan. The system is designed so people must use the large Western Union multinational institution which operates within the formal financial system, instead of a specific and trusted individual who has been a part of their community for years. It is

possible that if a specific Western Union location operated for a significant length of time with the same manager that people might develop trust with the manager, but that is still not trust with the institution of Western Union rather that is trust in the person.

Traditional Bank Wire Transfer: As the Special Inspector General for Afghanistan Reconstruction (2014) noted, the Afghan banking sector is rife with corruption and scandal. Virtually non-existent oversight and poor management have contributed to scandals, including one where almost US$1 billion were unaccounted for due to "loans" written, an event which almost collapsed the largest bank in Afghanistan - resulting in the general population having little trust in the system. Without having faith that their money will be safe, there is little incentive for individuals or small businesses to utilize traditional banks and their wire transfer systems.

Bitcoin: Bitcoin is a non-centralized but controlled system with no singular authority in charge. It is also a new system that relies on technology which people may have limited access to in war-torn and predominantly rural Afghanistan. Additionally, Bitcoin's setup as a currency with constantly changing value is a financial asset completely unfamiliar to ordinary Afghans, most of whom do not even possess a bank account. This results in significant uncertainty and a lack of information about Bitcoin. Afghans trust people more than institutions but for Bitcoin, where neither individuals or institutions have control, it is a distant and foreign transfer method that is unlikely to be trusted without buy-in from Hawaladars or other trusted community leaders.

Reliability

Hawala: Hawala enjoys high reliability due to its successful continuing operations over hundreds of years, especially as other institutions like banks have risen and fallen. The success of

Hawaladars and their families at repeatedly, successfully completing transactions using the Hawala System has created reliability in the eyes of the Afghan people (Payind, 2021). The system has continued to operate through both the Soviet and US invasions and the replacement of central government administrations (Payind, 2021). Due to this history of enduring success, and repeated successful transactions, the system as a whole is viewed as highly reliable by the people.

In Person Western Union Transfer: Western Union has not faced the reputational damage traditional banks have and has avoided debilitating scandals, successfully operating and transferring money since 1871 (Western Union, 2021). Since Western Union is successfully utilized by Afghans sending transactions to and from Afghanistan, it has high reliability, and as more and more transactions are successfully completed, reliability will continue to grow.

Traditional Bank Wire Transfer: The Banks in Afghanistan are not considered reliable. The high corruption in the government has resulted in little to no oversight (SIGAR, 2014) and scandals that have taken billions from the Banks like in the Kabul Bank Scandal where the brother of the former President Hamid Karzai was a participant of the fraud scandal (Reuters 2014, The World Bank 2018) have eroded any sense of reliability. Furthermore, Afghans are afraid that if there is significant instability and the government fails again, the banks will be one of the first targets for criminals, and thus there is little faith that their money will be safely stored or that they will be able to access it (Payind, 2021).

Bitcoin: Bitcoin is reliable as a method of transferring value, as no institution or person has control over the system and transactions are public and can be verified. As a digital system there is a risk of cyber-related attacks and there have been security issues with some Bitcoin exchanges (Security Magazine, 2020). Anyone can see transactions and users can verify to check

that their transaction was successful (Bitcoin.com, 2020). The transfer system itself as a result has a medium level of reliability for transfers between parties.

Transaction Speed

Fast transaction speeds are important to the success of remittance/value transfer systems. Individuals in Afghanistan often receive remittances because they need the money being sent home from family and friends outside of Afghanistan (Payind, 2021). Delayed or slow transactions are therefore not ideal. The speed of transactions is determined by the time when the transaction request is placed, the location where funds are being sent, and the network used to transfer funds. In addition, the time needed to travel to points of transfer also impact the overall speed of the remittance as it can increase the lead time when originators or recipients can send or collect money if they live far away and must travel to and from a transfer location. However, some methods can nearly instantaneously perform the actual transfer of funds between initiator and recipient.

Hawala: Hawala transactions are efficient and fast, like bank transfers and Western Union transfers, as physical funds are not transferred, just the value of the transaction. Instead, Hawaladars communicate between themselves about the transaction and the recipient can pick up the transferred value as soon as the local Hawaladar is notified, usually between 1-2 days after the transfer is initiated (Schaeffer, 2008).

In Person Western Union Transfer: Western Union offers different in-person options to determine when recipients receive funds for pickup. However, Western Union physical locations are closed during certain holidays (which differ from country to country), and closures can vary from location to location which can delay transfers if the initiator or receiver want to begin or

receive money during a holiday. Individuals can choose between *Money in Minutes*, *Next Day*, or *Direct to Location* options (Western Union, 2021). If *Money in Minutes* is chosen, as the name indicates, the funds are generally available within minutes of the transfer. *Next Day* transfers allow individuals to pick up money generally 24 hours after the transaction begins, and a *Direct to Location* transfer takes 2 to 5 days for the funds to be available for the recipient. Transferred funds to Afghanistan are available to the recipient in minutes if the recipient wants cash and the initiator uses the in-person pay-in store method. However, the transaction speed may be impacted by the ultimate destination country, the availability of local currency, as well as local regulations. Also, Western Union locations are often in bank locations (Western Union, 2021) and thus if individuals live outside of cities the overall transaction speed may be longer as people have to travel to and from the nearest Western Union location to send or receive funds.

Traditional Bank Wire Transfer: Bank Wire transfer transaction times vary depending on the location funds are sent from or to, as well as restrictions around bank operating hours and bank holidays when banks are not open. Within a country, like Afghanistan, funds can generally be transferred within 24 hours (but can be up to 3 days) and ready for pickup as soon as the funds are available in the recipient's account. Times are extended when the transfer requires moving funds from one nation to another nation, such that a wire transfer from the U.S. to Afghanistan can take several days to clear through the banks before recipients have access to the funds due to increased regulations and requirements around global transfers. Also, bank locations are concentrated within cities and as a result if individuals live far away from the bank branch the speed slows because it takes longer for the recipient or initiator to travel to and from the bank to participate in the transfer.

Bitcoin: Bitcoin transfer speeds are directly impacted by the nature of the transfer and the familiarity the parties have with using Bitcoin. Since Bitcoin is a digital currency, it requires a digital wallet to store and transfer, initiators open their digital wallet and can send the desired amount of Bitcoin to the recipient's wallet address. However, the transaction speed varies greatly with some transactions clearing in minutes whereas others take hours or even days before recipients receive the transferred Bitcoin(s). This large variance is due to the number of Bitcoins the blockchain system can process in a day. During high transaction volumes, the time a transaction takes to process increases and thus individuals have no easy way to ascertain how quickly their transferred Bitcoin will be received by the other party. Once the Bitcoin transfers the recipient has a choice to keep the funds as Bitcoin or transfer them to their choice of real currency.

Fees

Fees can have a significant impact on the method chosen by individuals to transfer funds as fees reduce the amount of value that can be transferred. For Afghans, if remittances are sent back to Afghanistan from the widely scattered diaspora, minimizing fees is important to ensure maximum value is delivered to the recipient. Afghanistan had a total of US$679 million sent to the country via remittances in 2011 (Vanore & Marchand, 2012) and changes in fees can impact the amount sent in remittances.

Hawala: Hawaladars charge transaction fees to facilitate the transaction and cover associated costs. Fees are generally 2%-5% of the transaction value, which is much lower than traditional banks or Western Union due to minimal operating expenses and no regulatory costs (El-Qorchi, 2002). For example, if someone transferred US$100 through Hawala, the Hawaladar would

charge them between US$2-$5 to transfer the funds to their destination. Individual Hawaladars ultimately have full control over the fees charged and are free to waive fees or raise them to increase business or avoid government currency controls.

In Person Western Union Transfer: Western Union charges a service fee to transfer funds between the initiator and recipient in the currency the initiator utilizes. Fees can be estimated using on online tool or at a Western Union location and can change based on the transfer speed option chosen, the location money is transferred to, and other factors (Western Union, 2021). However, once fees are set for the transaction and are paid, recipients do not have to pay additional fees. As of February 2021, if an initiator in the U.S, sent US$100 to Afghanistan, they would be charged a flat $10 fee to facilitate the transfer (**See Figure 6**) and Western Union would use their current exchange rate to convert the funds into Afghani for the recipient to receive. Value can be lost in the currency conversion depending on the exchange rate used for the transaction as Western Union profits from the exchange rate (Western Union, 2021).

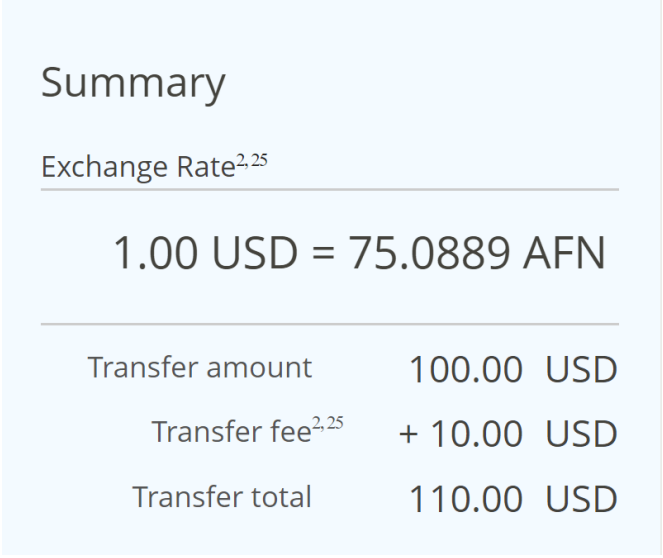


FIGURE 6: WESTERN UNION PRICE ESTIMATOR FOR MONEY TRANSFER OF US$100 FROM THE US TO AFGHANISTAN

Traditional Bank Wire Transfer: Banks charge fees for wire transfer services, with larger fees for international transactions. Unlike Hawala which charges a percentage as a fee, banks utilize a flat range of fees depending on the destination. For international wire transfers, most U.S. banks charge between $40-$50 for an outgoing international wire transfer, regardless of the value of the funds being transferred. Thus, an individual in the U.S. transferring US$100 to Afghanistan would have to spend an additional US$40-$50 in fees for the bank to process the transfer (an almost 50% fee for a transaction of this low value).

Bitcoin: Bitcoin transfers require use of a digital wallet which charges a fee to transfer funds from one individual to another. Fees are highly variable and change depending on the service used to transfer the funds. Digital wallet's, such as *Coinbase*, charge a transaction fee based on their "estimate of the network transaction fees that [they] anticipate paying" and the ultimate fee might be different than the estimate (Coinbase, 2020). However, the actual fee is disclosed at the time the transaction occurs. Coinbase charges a minimum of 4% for every transaction, however transactions over the Bitcoin verified Blockchain system could be charged fees much higher, with some as high as 30% of the transaction amount (Huntress, 2018).

Anonymity

Many Afghans want to avoid currency controls and government bureaucracy (Schaeffer, 2008) which can limit, and slow down remittances being sent to loved ones. For payment systems, anonymity shields transaction details like the amount transferred and participant identification from government or international detection. Without knowing if funds are being sent or how much is sent, individuals can avoid government controls. In informal banking - by far the dominant method of transfer in Afghanistan - anonymity is an outcome of having a

system designed before the implementation of standard government-issued ID's and current international financial rules.

Hawala: The Hawala systems has the highest level of anonymity for transactions as the system design compartmentalizes information and limits transaction-related details to the directly involved parties. For example, if the initiator transfers funds through the system to the recipient, only these two people and the Hawaladars facilitating the transaction know the value of the transfer or the identities of the involved parties. In fact, if the involved parties are known to the Hawaladars, formal identification documentation may not be necessary since community-built trust renders formal identification irrelevant. Due to Hawala's 'off-grid' process and lack of a central ledger to track transactions, it provides the highest level of anonymity to users.

In Person Western Union Transfer: In person Western Union money transfers require both the initiating and recipient parties to complete their part of the transaction at a physical Western Union location. Western Union must follow global banking rules and country-specific regulations and thus requires parties to present valid, formal identification to initiate all transfers or retrieve transferred funds. Parties must present a valid Passport, Identity Card, Driver's License, Residence Card, or other standard form of government issued identification which conforms to the banking laws and regulations for the country in which the office is located. Identification must verify the full name of the individual as well as their permanent address. In addition, the initiator must send the tracking number (MTCN) to the recipient who will need the number to pick up the funds from their local Western Union location (Western Union, 2021). Once a transaction is initiated the transaction information, including the names of involved parties and the amount transferred, is stored on the Western Union system. Governments can access the information with proper authorization, such as a court ordered warrant. Due to these

requirements and regulations, Western Union money transfers are not anonymous and provide no anonymity for individuals using the service.

Traditional Bank Wire Transfer: Traditional banking wire transfers are the least anonymous form of transferring funds. Banks are subject to "know your customer" and anti-money laundering laws which require all organizations facilitating transfers to collect and store information. Senders go to a local bank branch to fill out International Money Transfer paperwork or complete the necessary digital paperwork on their bank's website. The bank fills out the branch information along with the transfer reference number, bank identifier number, destination country, and date of transaction. Additionally, the initiator's details including full name and residential or business address, and sender's account number, as well as the recipient's details including their full name, residential or business address, description of payment, beneficiary's bank code, account number (IBAN), bank name and address, and any intermediary bank name and address. The information is often sent over the SWIFT system, which has many banks using the system and notifies the recipient's bank of the transfer while the funds are then moved from the senders to beneficiaries' account. All information is collected and stored by the banks and available for regulators and government access as required. Furthermore, suspicious transactions are supposed to be proactively reported to the government by the banks involved and may result in funds being intercepted or frozen and inaccessible to the bank account owner. Thus, this system is the least anonymous.

Bitcoin: Bitcoin transactions cannot be easily traced to specific individuals or entities, however, all transactions are "public, traceable, and permanently stored in the Bitcoin network" (Bitcoin Project, 2020). Transactions are traced back to the user's Bitcoin address which is the only way to see where transactions originated and were sent. Anyone can find the balance and transactions

for any Bitcoin address but cannot identify who or what utilizes a specific address. However, if a user reveals the address they use, the transaction information is publicly more complete and other individuals can see who sent or received funds. Thus, while actual transactions are public, they are currently untraceable to a specific individual or business since digital wallet addresses can be (and most often are) anonymous. Governments can see transactions, including amounts, but are unable to find the identity of people using the system to send and receive Bitcoin which can then be converted to another currency. This system appears to be somewhat anonymous.

Table 1 summarizes the attributes of these financial methodologies.

Table 1

	Hawala	Western Union	Traditional Western Banking	Bitcoin
Trust	**High** Hawala has been used for centuries and requires people to interact with local community individuals who have gained community trust over time.	**Low** Western Union has been used to transfer remittances home. As an institution it has less trust than hawala but avoids the institutional reputational damage of banks.	**Low** Rampant historic corruption in the government and banks creates little trust of the Afghan people in banks. Only 10-15% of Afghans, and 2/3 of business have a bank account.	**Low** Bitcoin is a radically new system that involves no human interaction and varying fees, transaction speeds, and uncertain guarantees about anonymity for Afghans who do not regularly utilize the service. There is not enough interaction with the system to build trust.
Reliability	**High** Hawala has been used for centuries to successfully transfer funds even through period of severe insecurity.	**High** Western Union has successfully transferred funds since 1871 and has successfully operated in Afghanistan for decades.	**Low** Corruption, a lack of trust, and the idea that banks are an ideal target for criminal activity if the Government fails contributes to low reliability in the eyes of the people.	**Medium** Bitcoin is not run by an individual and transactions are stored on a public ledger to users can see and know when transactions successfully go through. Some thefts of Bitcoin have occurred at specific Bitcoin exchanges leading to medium reliability.
Transaction Speed	**1-2 days** Hawaladars communicate with each notification of transaction details. Funds are available for pickup from local Hawaladar after completing internal communications.	**Variable from Minutes to Days** Transaction speeds are dependent on type of method selected. Transactions can be completed within minutes if *Money in Minutes* service chosen. Transaction Speed slows if individual lives far from Western Union location as it takes time to travel to the location.	**Minimum 1 day to several days'** Domestic transfers usually clear within 1 day. International transfers can take days longer depending on originating location and destinations. If individual lives far from bank, speed will slow as travel time delays retrieval of funds.	**No standard time** Bitcoin transaction speeds vary greatly as speed depends on the volume of transfers when the transfer is initiated.
Fees	**Variable, but low** **2%-5%** of transaction value.	**Sliding Scale Fee. (Variable based on speed and transaction)** A transfer From the US to Afghanistan of US$100 would incur a $10 fee. Fees change depending on transfer type and location.	**$40-$50 flat fee** For international transfers regardless of transfer value.	**Variable from low to very high** Rates vary depending on volume, with a minimum of 4%, but can rise to as high as 30% of transaction value.
Anonymity	**High** Hawala is completely untraceable and anonymous outside of the parties directly involved in the transaction. Transaction details are not available for government scrutiny.	**Low** Western Union transactions require identification verification of initiator and recipient, and detailed transaction information is recorded. All information is subject to government regulations and oversight.	**Low** Identification is required to initiate transfers and transaction information is recorded and subject to government oversight. Transactions over a certain monetary value are reported to government agencies.	**Medium** Bitcoin transactions are public and stored on the blockchain ledger system. However, transaction can only be traced to a Bitcoin address, not to a specific individual. Governments cannot yet identify who utilizes specific addresses so transactions can avoid government scrutiny.

Proposed Improved System Design

Ultimately, Afghans have several options to transfer money and remittances from, to, and within, Afghanistan. Western Union and Hawala are the primary methods used by Afghans outside of Afghanistan to transfer money into the country; however, neither system is perfect. Hawala transactions are trusted, affordable, and quick, but remain outside of the legal methods of transfer. The primary difficulty is not on a local Afghan recipient finding their trusted. local Hawaladar; but rather with the initiator located outside of Afghanistan finding a Hawaladar in the system they can utilize. Western Union transfers offer the most convenient transfer method but requires official and verifiable identification and address information, which are not always available to those being sent funds, and Western Union transfer centers are located within banks - highly concentrated in cities - making receipts of funds largely inaccessible to Afghans living in smaller or remote communities. Nonprofit organizations and businesses also need a legal way to transfer vast sums of money in and out of Afghanistan to aid with war-relief and rebuilding efforts. Traits from all the previously detailed systems should be incorporated to develop a trusted and used transfer system in Afghanistan that operates within the confines of international law.

This new proposed system requires community support and, like Hawala, would need local merchants, Hawaladars, to be educated on and use the system for buy-in from the larger population. The main difference between the proposed *System X* and Hawala is that System X must require some identification to follow local rules while also utilizing technology to securely transfer funds and provide an acknowledgement of transfer success. This enables the system to decline users associated with the Taliban, and other bad actors such as other terror groups, poppy

farmers, and opium producers, while enabling ordinary Afghans to use it. The bank scandals and corruption in the central government has left Afghans with significant distrust of institutions tied to the fate of the Central Government, so System X must be locally managed but internationally overseen. System X is proposed to utilize existing Hawaladars who use a digital transfer system like Western Union's online money transfer, to send and receive money from other Hawaladars. Individuals using the system must be able to provide proof of identify, from either a government ID or an affidavit regarding their identification to their Hawaladar who keeps a local ledger of transactions which details the names of both the initiator and recipient as well as the transfer destination and if the value of the transfer is over a present threshold for transfer value. This way verified people can initiate and receive transfers without their information being broadcast over networks while also still having a record of transactions available to authorities if needed. By having the local Hawaladars manage System X the same self-regulating process the Hawala system uses and also benefit from, such as having local approval, is incorporated into the new system. Finally, the system requires the Hawaladars to notify the initiator when funds are received by the recipient, so they know when their funds have successfully been transferred and received. Thus, transfer success notification and verification are essential and local community leaders understanding of the system and endorsement will be required for Afghans to utilize the new System X network. Additionally, as an online-based system, Afghanistan must continue to expand infrastructure like stable electricity and cellular towers to enable the system to operate reliably. Finally, growing stability in the power network and expanding cell tower coverage should allow the system to be utilized not just by Afghans in the city of Kabul but also in smaller cities and other communities. While there is great uncertainty over the future of Afghanistan and peace talks, a more modern and accessible transfer system that respects Afghan's desire for

privacy and trust has the ability to improve the ability of all Afghans to send and receive funds from within their country and around the world.

Conclusion

There are several systems available for use by Afghans seeking to send money both internationally and domestically inside of Afghanistan. Each system has strengths and weaknesses. Hawala has high trust, anonymity, and reliability as well as low fees and competitive transaction speeds, but can easily and anonymous be used by terrorist or criminal organizations and other bad actors. Western Union is reliable and has low fees but has low trust as people interact with an institution instead of a person in their community, nor does it allow for anonymity of transactions. Bitcoin, while moderately reliable and partially anonymous, has varying fees and is not trusted and because it is so new also requires having infrastructure like reliable power and cell signal that is not yet widely available in Afghanistan. Finally, western-style banking is neither reliable or trusted in Afghanistan (although it may be in other parts of the world) as in Afghanistan it has had limited or no oversight coupled with rampant corruption which have made it unusable to most Afghans, as well as high relative fees for low value transactions. It does have relatively fast transaction speeds but may have some times that transactions cannot occur due to business hours or bank holidays.

The proposed System X seeks to harness the power of trust, reliability, and low cost that Hawala enjoys by partnering with local Hawaladars to run the system while also locally recording some transaction information to prevent illicit groups from using the system. Furthermore, the proposed system uses electronic forms of transfers to both speed up transfer times and to allow people to get verification that their transfer was successful. Overall, the

proposed system seeks to allow Afghans to continue to easily transfer funds by using a system run by Hawaladars trusted by the people while also stopping abuse and cutting off illegal transfers.

Bibliography

Aman, M., Nenovsky, N., & Mahmoud, I. (2014). The informal system of remittances and currency board: complementarity or antagonism? the case of hawala transfers in Djibouti. *Savings and Development, 38*(1), 133-154.

Ateed, H., & Rehman, A. U. (2020, June 4). Determinants of Bank Choice in Afghanistan. *Journal of Islamic Finance, 9*(1), 61-75.

Ballard, R. (2005). Coalitions of Reciprocity and the Maintenance of Financial Integrity Within Informal value Transmission Systems: The Operational Dynamics of Contemporary Hawala Networks. *Journal of Banking Regualtions, 6*(4), 319-352.

Bitcoin Project . (2020). *Protect your Privacy*. Retrieved December 2020, from Bitcoin.org: https://bitcoin.org/en/protect-your-privacy.

Bitcoin Project. (2020). *Some things you need to know*. Retrieved December 2020, from Bitcoin.org: https://bitcoin.org/en/you-need-to-know#anonymous

Bitcoin.com. (2020). *How do I send and receive Bitcoin?*. Retrieved December 2020, from Bitcoin.com: https://www.bitcoin.com/get-started/how-do-i-send-and-receive-bitcoin/

Chuah, S. H., Gachter, S., Hoffmann, R., & Tan, J. H. (2016, November). Religion, discrimination and trust across three cultures. *European Economic Review, 90*, 280-301.

Cockayne, J., & Shetret, L. (2012). *Capitalizing on Trust: Harnessing Somali Remittances for Counterterrorism, Human Rights and State Building.* Global Center on Cooperative Security.

Coinbase. (2020). Coinbase pricing and fees disclosures.

Coppola, F. (2020). *Pros and Cons of Bitcoin for International Payments.* American Express.

Da Afghanistan Bank. (2019). *Licensed Financial Institutions*. Retrieved January 2021, from Da Afghanistan Bank: https://www.dab.gov.af/Licensed-Finacial-Institutions

El-Qorchi, M. (2002, December). The Hawala System: How does this informal funds transfer system work, and should it be regualted? *Finance and Development, 39*(4). Retrieved August 2020 from https://www.imf.org/external/pubs/ft/fandd/2002/12/elqorchi.htm

Federal Deposit Insurance Corporation. (2020, October 19). How America Banks: Household Use of Banking and Financial Services. Retrieved April 2021, from FDIC: https://www.fdic.gov/analysis/household-survey/index.html

Federal Deposit Insurance Corporation. (2020, May 8). How Are My Deposit Accounts Insured by the FDIC? Retrieved March 2021, from FDIC: https://www.fdic.gov/deposit/covered/categories.html

Financial Industry Regulatory Authority. (2021). *2090. Know Your Customer*. Retrieved February 2021, from FINRA: https://www.finra.org/rules-guidance/rulebooks/finra-rules/2090#:~:text=Every%20member%20shall%20use%20reasonable,on%20behalf%20of%20such%20customer.

Gibbons-Neff, T., & Rahim, N. (2019, October 9). *To Disrupt Elections, Taliban Turn to an Old Tactic: Destroying Cell Towers*. Retrieved February 2021, from The New York Times : https://www.nytimes.com/2019/10/02/world/asia/afghanistan-taliban-cell-towers.html

Harford, T. (2017, January 30). The warrior monks who invented banking. Retrieved April 2021, from British Broadcasting Corporation: https://www.bbc.com/news/business-38499883#:~:text=The%20Templars%20dedicated%20themselves%20to%20the%20defence%20of%20Christian%20pilgrims%20to%20Jerusalem.&text=A%20pilgrim%20could%20leave%20his,Western%20Union%20of%20the%20crusades.

Huntress, C. (2018, February 2). How to Send Bitcoin Wallet to Wallet Transfer. Retrieved January 2021, from https://medium.com/@caelanhuntress/how-to-send-bitcoin-wallet-to-wallet-transfer-59193eda33c#:~:text=Every%20time%20you%20make%20a,%2C%20or%20out%20of%2C%20cryptocurrency.

Johnson, K. (2014, October 2). Karzai brothers, others still owe millions to Kabul Bank: afghan watchdog. Retrieved March 2021, from Reuters: https://www.reuters.com/article/us-afghanistan-bank-watchdog/karzai-brother-others-still-owe-millions-to-kabul-bank-afghan-watchdog-idUSKCN0HR1MU20141002

Jost, P., & Sandhu, H. S. (n.d.). *The Hawala Alternative: Remittance System and Its Role in Money Laundering.* Washington DC: United States Department of the Treasury .

Kubo, K. (2017). Evolving informal remittance methods among Myanmar migrant workers in Thailand. *Journal of the Asia Pacific Economy, 22*(3), 396-413.

Merriam-Webster. (2021, April). Reliability. Retrieved April 2021, from Merriam-Webster Dictionary: https://www.merriam-webster.com/dictionary/reliability

Merriam-Webster. (2021, April). Reliable. Retrieved April 2021, from Merriam-Webster Dictionary: https://www.merriam-webster.com/dictionary/reliable

Merriam-Webster. (2021, April). Trust. Retrieved April 2021, from Merriam-Webster: https://www.merriam-webster.com/dictionary/trust

Monsutti, A. (2004, June). Cooperation, Remittances, and Kinship among the Hazaras. *Iranian Studies, 37*(2), 219-240. Retrieved August 2020, from https://www.jstor.org/stable/4311622

Nakhasi, S. S. (2007). Western Unionizing the Hawala?: The Privatization of Hawalas and Lender Liability. *Northwestern Journal of International Law & Business, 27*(475), 475-496.

Nyoni, P. (2012). New insights on trust, honour and networking in informal entrepreneurship: Zimbabwean malayishas as informal remittance couriers. *Anthropology Southern Africa, 35*(1/2), 1-11.

Pairamma, J., & Le De, L. (2018, Sep). Remittances for Disaster Risk Management: Perspectives from Pacific Island Migrants Living in New Zealand. *International Journal of Disaster Risk Management, 9*(3), 331-343.

Passas, N. (2003). Hawala and Other Informal Value Transfer Systems: How to Regulate Them? *Risk Management, 5*(2), 49-59.

Passas, N. (2006). Demystifying Hawala: A Look into its Social Organization and Mechanics. *Journal of Scandinavian Studies in Criminology & Crime Prevention, 7*, 46-62.

Payind, A. (2021, March 24). Personal Communication. (N. Rao, Interviewer)

Pieke, F. N., Van Hear , N., & Lindley, A. (2007, Jul). Beyond control? The mechanics and dynamics of 'informal' remittances between Europe and Africa. *Global Networks, 7*(3), 348-366.

Rondeaux, C. (2011, April 4). *Cleaning up Afghanistan's banking system*. Retrieved August 2020, from Foreign Policy Magazine : https://foreignpolicy.com/2011/04/04/cleaning-up-afghanistans-banking-system/#

Schaeffer, E. (2008). Remittances and Reputations in Hawala Money- Transfer Systems: Self-Enforcing Exchange on an International Scale. *The Journal of Private Enterprise, 24*(1), 95-117.

Schramm, M., & Taube, M. (2003). Evolution and institutional foundation of the hawala financial system . *International Review of Financial Analysis , 12*(4), 405-420.

Security Magazine. (2020, February 17). *$1.9B in crypto currency stolen by hackers last year*. Retrieved February 2021, from Security Magazine : https://www.securitymagazine.com/articles/94627-19b-in-crypto-currency-stolen-by-hackers-last-year#:~:text=According%20to%20data%20presented%20by,Money%20Laundering%20and%20Crime%20Report.

Special Inspector General for Afghanistan Reconstruction. (2014). *Afghanistan's Banking Sector: The Central Bank's Capacity to Regulate Commerical Banks Remains Weak* . Washington, DC: Special Inspector General for Afghanistan Reconstruction.

Special Inspector General for Afghanistan Reconstruction. (2019). *Quarterly Report to the United States Congress October 2019.* Washington, D.C. Retrieved February 2020, from https://www.sigar.mil/pdf/quarterlyreports/2019-10-30qr.pdf

The World Bank. (2018). *Modernizing Afghan State-Owned Banks.*

Vanore, M., & Marchand, K. (2012). *Afghanistan Remittance Overview and Trends.* International Organization for Migration.

Western Union . (2021). *Recieve Money*. Retrieved January 2021, from Western Union: https://www.westernunion.com/gt/en/faq-receive-money.html

Western Union. (2021). *About*. Retrieved April 2021, from Western Union: https://corporate.westernunion.com/

Western Union. (2021). *Send Money in Person*. Retrieved January 2021, from Western Union: https://www.westernunion.com/fi/en/faq-send-money-in-person.html#:~:text=Find%20a%20nearby%20agent%20location%20online%20or%20look%20for,in%20your%20local%20telephone%20directory.&text=Return%20to%20top-,Can%20I%20receive%20money%20at%20an%20agent%20locat

Yahoo Finance. (2021, March). *Bitcoin USD (BTC-USD)*. Retrieved March 2021, from https://finance.yahoo.com/quote/BTC-USD

Yellin, T., Aratari, D., & Pagliery, J. (2018, August 8). *What is bitcoin?* Retrieved March 2021, from CNN Money: https://money.cnn.com/infographic/technology/what-is-bitcoin/index.html